

REMARKS

The main technical problem solved by the present inventors was that the prior-art tests to assess skin neurosensitivity were not adequately discriminating and precise (See paragraph [0034] of the present specification). It means that these prior-art tests were not ideal to precisely grade people according to their skin neurosensitivity.

As emphasized in the previous responses, the presently claimed invention has selected a specific range of concentrations of a specific irritant and allows grading more precisely than the prior-art tests and without pain, individuals according to their neurosensitivity, in a method of evaluating the level of skin neurosensitivity.

The Office Action dated March 18, 2009 asserts at page 6, lines 18-19, that "If [the choice of specific concentrations of capsaicinoid] leads to the anticipated success, it is likely the product not of innovation but ordinary skill and common sense," and at page 7, lines 12-14, that "absent some demonstration of unexpected results from the claimed parameters, this optimization would have been obvious at the time of applicants' invention."

Applicants wish to again direct the Examiner's attention to an article entitled "Detection thresholds of capsaicin: A new test to assess facial skin neurosensitivity" by Jourdain et al., *J. Cosmet. Sci.*, 56, 153-166 (May/June 2005), a copy of which was previously submitted on September 28, 2007. This article relates to the presently claimed method and contradicts the Examiner's assertion.

Specifically, by using the method according to the presently claimed invention, i.e., by using low concentrations of between $1 \times 10^{-6}\%$ and $5 \times 10^{-4}\%$, Jourdain et al. observed a large distribution of the random adult female population according to capsaicin detection thresholds (see page 163 and Fig. 2a of the article). This distribution had surprisingly a non-unimodal shape which allows dividing the population in at least two population groups. This kind of division was not so easy to make with the prior-art tests. By comparing the results

showed in Figure 7 of Robinson et al. to those obtained by the presently claimed invention (Figure 2 of Jourdain et al.), it's quite easy to understand that the gradation of individuals in two groups, according to their neurosensitivity, will be more easier (i.e., more discriminating) with the presently claimed method than with the method disclosed in Robinson et al.

Moreover, thanks to the presently claimed method, Jourdain et al. demonstrated that "detection thresholds were globally more strongly associated with self-declared skin reactivity to environment (cold, wind, fast changes in temperatures) than cosmetics." This was not possible with the prior art tests. The presently claimed method thus allows exploring a larger aspect of self-declared sensitive skin than the lactic acid stinging test and than the test disclosed in Robinson et al. which was more focused on the skin reactivity to cosmetics. Applicants advise that based on ordinary skill in the art and common sense, these successes would not have been anticipated. Therefore, it has been clearly demonstrated the criticality of the particular range of concentrations in the presently claimed invention, which can achieve unexpected results relative to the Robinson's range.

The Advisory Action dated September 15, 2009 asserts that in Robinson et al., "the lowest capsaicin concentration still evoked a moderate response from some of the subjects tested, indicating that the minimum threshold detection limit for capsaicin would be lower still than the lowest concentration tested and particularly so for individuals with sensitive skin."

Applicants wish to point out that the lowest concentrations disclosed in Robinson et al. are far from the highest concentration of the range in the presently claimed invention. By decreasing the concentrations of capsaicin, one skilled in the art would have had a high probability to choose either a too low range or a too high range of capsaicin concentrations and thus to not reach the detection thresholds of the individuals.

There is nothing in the cited documents disclosing or suggesting that the capsaicin detection thresholds, which allow a precise gradation of individuals according to their skin neurosensitivity, would be reached by specifically using the range of concentrations in the presently claimed invention.

Particularly, in Robinson et al., the aim was to develop better methods for irritation risk assessment for new dermatological products. Based on Robinson et al., one of ordinary skill in the art would not have been motivated to improve the accuracy of a method of evaluating skin neurosensitivity by decreasing the irritant concentrations because the method disclosed in Robinson et al. had a completely different aim than the presently claimed method and Robinson et al.'s method does not have any problem with the disclosed capsaicin concentrations.

Further, in Seidenari et al., the stinging test is disclosed as lacking objectivity which is a very important criteria to grade individuals in well defined groups. Therefore, it is respectfully submitted that one of ordinary skill in the art would have had no apparent reason to combine Seidenari et al. with Robinson et al.

If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at her earliest convenience.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: February 18, 2010

By: 

Fang Liu, Ph.D.

Registration No. 51,283

Customer No. 21839

703 836 6620